

Notice of Allowability

Application No.

10/690,638

Examiner

Gregory F. Cunningham

Applicant(s)

CHALFIN ET AL.

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 10/23/2003.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 5/18/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This action is responsive to application filed 10/23/2003.
2. The disposition of the claims is as follows: claims 1-21 are pending in the application.
Claims 1, 7, 13 and 18-20 are independent claims.

Drawings

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael Messinger (Registration 37,575) on 09/28/2005.

The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

In Fig. 3, item numbers 302 and 304 have been added. See attached amended Fig. 3 drawing.

Allowable Subject Matter

4. Claims 1-21 are allowed.
5. The following is an examiner's statement of reasons for allowance:

Applicant's independent claims 1, 7, 13 and 18-20 stands novel over the related prior art. For instance, while the related art of Farinelli (US 20050088450), Sanz-Pastor et al. (US

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6,747,649), Tanner (US 6,618,053) and Migdal et al. (US 5,760,783 A) all make use of texture roaming, however, they do not use clip-map multiple levels of detail wherein the multiple levels of detail employ an extra-dimension coordinate.

Likewise with Tanner et al. "The Clipmap: a Virtual Mipmap" and J. Montrym et al. "InfiniteReality: A Real-Time Graphics System", both also lack the extra dimension associated with clip-mapping as claimed by the instant invention in independent claims 1, 7, 13 and 18-20.

Although independent claim 19 is directed toward a host computer, as defined by the applicant, its commodity graphics hardware carries out rendering and applies texture to pixel based on an extra-dimensional clip-map, and therefore is sufficiently narrow enough to distinguish over that disclosed by Tanner et al.

Therefore as claimed by the combined elements of independent claim 1, 7, 13 and 18-20, the cited references and prior art of record lack separately and in combination the elements of said claims.

Claims 2-6, 8-12, 13-17 and 21 depend from allowed independent claims 1, 7, 13 and 20 and therefore are also allowed.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Responses

7. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires to fax a response, (703) 872-9306 may be used for formal communications.

Inquiries

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**



Greg Cunningham

Examiner

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9/28/2005

FIG. 3
 REPRESENTATION OF A CLIPMAP IN NORMAL 2D LOD BASED FORM AND AS A 3D TEXTURE

